F1-209

I. **Executive Summary**

a. **Project Title: SAN JOAQUIN RIVER NATIONAL WILDLIFE REFUGE RIPARIAN HABITAT PROTECTION AND FLOODPLAIN RESTORATION PROJECT**

Applicant Name: U.S. Fish and Wildlife Service, Sacramento Realty Office on behalf of San Joaquin River National Wildlife Refuge

b. **Project Description and Primary Biological/Ecological Objectives.** The U.S. Fish and Wildlife Service (USFWS) is requesting a total of $10,647,000 to help fund the acquisition, long term preservation and protection, and restoration of 6,169 acres of fish and wildlife habitat on and adjacent to the San Joaquin River National Wildlife Refuge (NWR) boundaries. The San Joaquin River NWR is part of the San Luis NWR Complex. All landowners are willing participants in the acquisition. The Service is collaborating with the Army Corps of Engineers, Natural Resources Conservation Service, Department of Water Resources, and numerous other agencies on portions of this proposed acquisition.

The objective of this proposal is to acquire lands and restore riparian and other wetland habitats along the San Joaquin River for the benefit of numerous species including Aleutian Canada goose, greater sandhill cranes, western yellow-billed cuckoos, raptors such as the Swainson's hawk and bald eagle, riparian brush rabbit, riparian wood rat, valley elderberry longhorn beetle, splittail, and San Joaquin tributaries fall-run chinook salmon. In addition, shorebirds, waterfowl, herons, and neotropical migratory songbirds will benefit from restoration and protection actions.

c. **Approach/Tasks/Schedule.** Depending on availability of funding, full acquisition would be completed by July 1998. Five landowners are involved, all of whom are willing sellers. The proposed project encompasses several components in three distinct phases. This proposal seeks CALFED funding only for Phase I which includes:

Task A.	Acquisition in fee title of 3,112 acres of San Joaquin River flood plain from three willing sellers on the west side of the river (See Figure 1 in the proposal);
Task B.	Acquisition in fee title of San Joaquin River (540 ac.) flood plain corridor (east side of the river) from one willing seller;
Task C.	Acquisition in fee title of Riley Slough (553 ac.) flood plain corridor (east side of the river) from one willing seller;
Task D.	Acquisition of a conservation easement on 1,964 ac. from one willing seller east of the river, and habitat development and wildlife management consultation;
Task E.	Site clean up at the acquisition described in A. above, and;
Task F.	Flood plain habitat restoration planning and engineering studies.

Phase I fee title acquisitions will become part of the immediately adjacent San Joaquin River NWR (currently 2,300 acres) and be administered and managed by the U.S. Fish and Wildlife Service.

The proposed fee title acquisitions and management will allow widening of the flood plain, provide transient storage of flood waters, facilitate ground water recharge, and allow riparian and wetland habitat restoration thus accomplishing a measure of downstream non-structural flood protection, as well as water quality, wildlife and fisheries benefits. The proposed conservation easement will perpetually preserve considerable existing riparian habitat, grassland, wetlands, croplands and will preclude subdivision and development.

d. Justification for Project and Funding by CALFED. The proposed project will allow for large-scale preservation and restoration of riparian and other wetland habitats along the San Joaquin River. These habitats, which support some of the greatest biodiversity in the State, have been reduced over 95% from historical levels in the Central Valley.

- If fully funded, the proposed project will preserve 17.7 miles of existing riparian corridor along the San Joaquin River, adjacent oxbows, and a portion of the lower Tuolumne River, and restore about 3,600 acres of riparian forest and seasonal wetlands.
- High quality habitats would be protected and restored, benefitting priority species such as the Aleutian Canada goose, greater sandhill cranes, western yellow-billed cuckoos, raptors such as the Swainson's hawk and bald eagle, riparian brush rabbit, riparian wood rat, valley elderberry longhorn beetle, splittail, and San Joaquin tributaries fall-run chinook salmon. In addition, shorebirds, waterfowl, herons, and neotropical migratory songbirds will benefit from restoration and protection actions.
- Additional benefits include non-structural flood protection. Areas would not be subject to damages during future floods, and a small reduction in peak floods on the San Joaquin will be provided as water is be stored temporarily in offstream areas.

e. Budget Costs and Third Party Impacts. The total cost of acquisition, clean-up, and restoration planning is $20,647,000. About $10,000,000 in funds are expected to be provided from other sources, so the Service is requesting $10,647,000 for full acquisition. All third party impacts have been addressed in this proposal.

f. Applicant Qualifications. The Sacramento Realty Office of the U.S. Fish and Wildlife Service has acquired property for the 10 major National Wildlife Refuges in California. Since its establishment in 1992, the Office has acquired over 189,237 acres in fee or easement. The Office presently has a staff of six highly qualified specialists with a combined experience of over 100 years in the areas of reality, appraisal, and environmental protection.

g. Monitoring and data evaluation. Upon acquisition, preliminary baseline monitoring will commence. Reports of progress in acquisition and restoration will be provided to CALFED.

h. Local Support/Coordination with other Programs/Compatibility with CALFED objectives Local support for the project is high. All tasks listed in this project are components of the 1995 San Joaquin River Management Plan. The project has received written support of Congressman Gary Condit (D-Modesto), California State Resources Agency, and numerous local citizens. This proposed project was specifically recommended by the California State Governor's Flood Emergency Action Team in their report dated May 10, 1997. These actions fulfill federal directives from the Council of Environmental Quality and Office of Mgmt. and Budget and help meet numerous state and federal agency goals such as non-structural flood protection projects, the Governor's Flood Emergency Action Team (FEAT) report, the San Joaquin River Mgmt. Plan, North American Waterfowl Mgmt. Plan, Central Valley Habitat Joint Venture and the Riparian Habitat Joint Venture, and the Aleutian Canada Goose Recovery Plan.

This proposal is entirely consistent with CALFED Bay-Delta Program non-ecosystem objectives of water quality, water supply reliability, and flood damage reduction.

SAN JOAQUIN RIVER NATIONAL WILDLIFE REFUGE RIPARIAN HABITAT PROTECTION AND FLOODPLAIN RESTORATION PROJECT

U.S. Fish and Wildlife Service
San Luis National Wildlife Refuge Complex
Sacramento Realty Office

Gary Zahm (Refuge Manager)
P.O. Box 2176
947 W. Pacheco, Suite C
Los Banos, CA 93635
Phone: (209) 826-3508
Fax: (209) 826-1445

Howard Stark (Realty Office)
2233 Watt Avenue, Suite 375
Jamaica Plaza
Sacramento, CA 95825
(916) 979-2085
(916)979-2092

Type of Organization: Federal Agency

Tax Status: Not Applicable

Technical and Financial Contacts: See Applicant Above

Participants/Collaborators: California Department of Water Resources, Natural Resources Conservation Service, U.S. Army Corps of Engineers

RFP Project Group Type(s): Land Acquisition; Aquatic and Terrestrial Habitat Restoration; Construction; Monitoring, Assessment, and Reporting

III. Project Description

a. Project Description and Approach

The proposed project encompasses several components in three distinct phases. This proposal seeks CALFED funding only for Phase I which includes:

Task A.	Acquisition in fee title of 3,112 acres of San Joaquin River flood plain from three willing sellers on the west side of the river (Fig 1);
Task B.	Acquisition in fee title of San Joaquin River (540 ac.) flood plain corridor (east side of the river) from one willing seller;
Task C.	Acquisition in fee title of Riley Slough (553 ac.) flood plain corridor (east side of the river) from one willing seller;
Task D.	Acquisition of a conservation easement on 1,964 ac. from one willing seller east of the river, and habitat development and wildlife management consultation;
Task E.	Site clean up at the acquisition described in A. above, and;
Task F.	Flood plain habitat restoration planning and engineering studies.

Phase I fee title acquisitions will become part of the immediately adjacent San Joaquin River NWR (currently 2,300 acres) and be administered and managed by the U.S. Fish and Wildlife Service.

Phase II will entail earthmoving and habitat restoration such as: breaching the main Corps of Engineer's levee and smaller levees at selected points thus allowing the restoration of a much broadened flood plain, restoring natural slough channel contours (all agricultural lands have been leveled), restoring upper and lower White Lakes, planting of oaks, button willow, box elder, elderberry, rose and blackberry (supplemental to the natural rapid re-establishment of primarily cottonwoods and willows across the flood plain). The proposed fee title acquisitions and management will allow widening of the flood plain, provide transient storage of flood waters, facilitate ground water recharge, and allow riparian and wetland habitat restoration thus accomplishing a measure of downstream non-structural flood protection, as well as water quality, wildlife and fisheries benefits. The proposed conservation easement will perpetually preserve considerable existing riparian habitat, grassland, wetlands, croplands and will preclude subdivision and development. These actions fulfill federal directives from the Council of Environmental Quality and Office of Mgmt. and Budget and help meet numerous state and federal agency goals such as non-structural flood protection projects, the Governor's Flood Emergency Action Team (FEAT) report, the San Joaquin River Mgmt. Plan, CALFED Bay-Delta Program, North American Waterfowl Mgmt. Plan, Central Valley Habitat Joint Venture and the Riparian Habitat Joint Venture, and the Aleutian Canada Goose Recovery Plan.

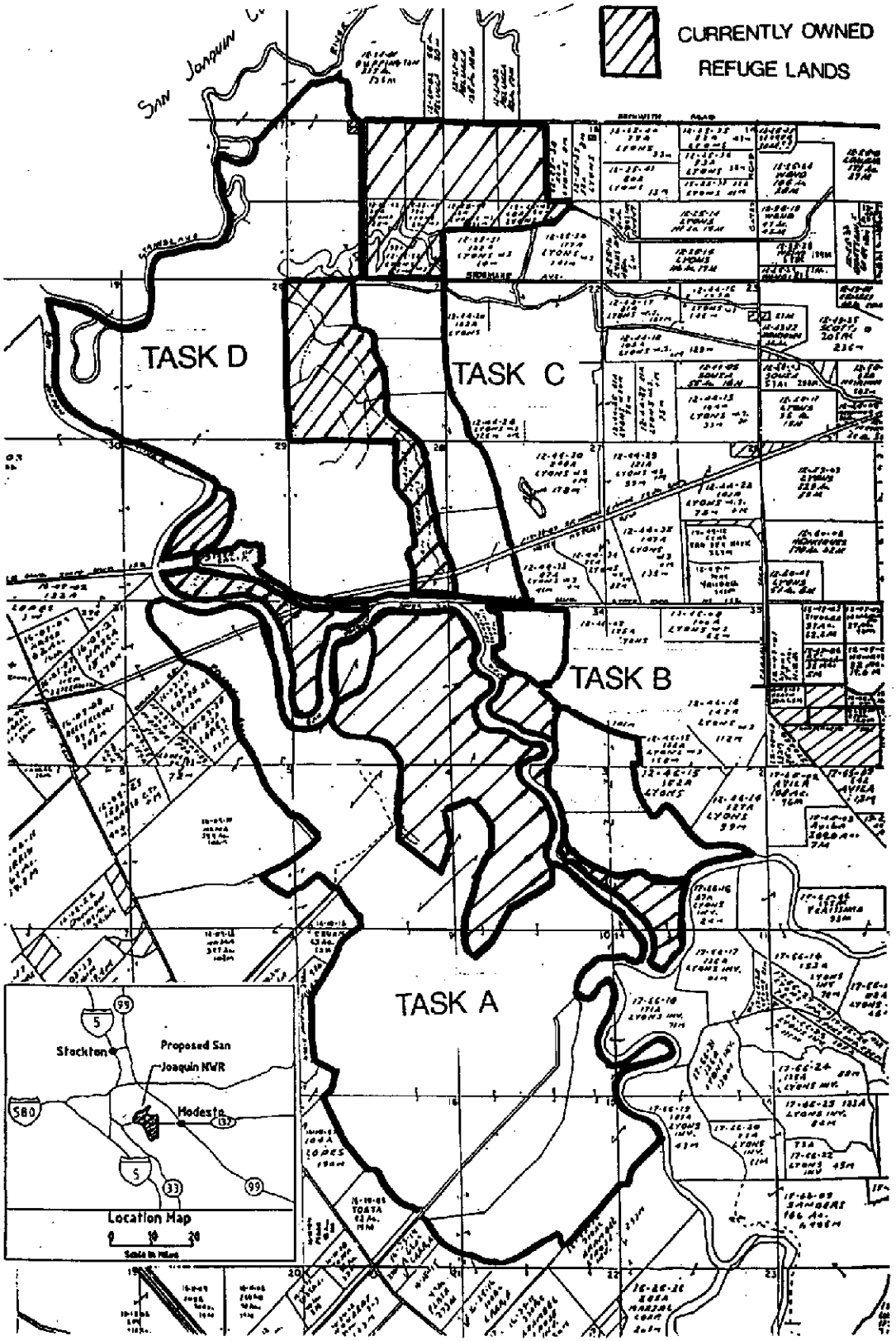
Phase III will seek CALFED funding for public education/outreach facilities such as a visitor contact center, information panels, etc. Subject matter would include: natural history of the San Joaquin River, Pacific flyway, riparian woodland habitat, wetlands and associated wildlife and fisheries.

b. Location and/or Geographic Boundaries of Project

The proposed project is entirely within Stanislaus County along the San Joaquin River. All of the acquisitions are within or adjacent to the San Joaquin NWR boundaries (Figure 1).

c. Expected Benefits

This project will provide numerous benefits that are consistent with the goals and objectives of the CALFED program, including:



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- If fully funded, the proposed project will preserve 17.7 miles of existing riparian corridor along the San Joaquin River, adjacent oxbows, and a portion of the lower Tuolumne River, and restore about 3,600 acres of riparian forest and seasonal wetlands.
- Protecting and restoring high quality habitats which would benefit priority species such as the Aleutian Canada goose, greater sandhill cranes, western yellow-billed cuckoos, raptors such as the Swainson's hawk and bald eagle, riparian brush rabbit, riparian wood rat, valley elderberry longhorn beetle, splittail, and San Joaquin tributaries fall-run chinook salmon. In addition, shorebirds, waterfowl, herons, and neotropical migratory songbirds will benefit from restoration and protection actions.
- An additional benefit will be a reduction in peak floods as water will be stored temporarily in offstream areas, non-ecosystem objectives of flood protection are incrementally benefitted from this project.
- Additional environmental and flood control benefits accrue from reduced need for dredging, clear and snagging operations, and levee maintenance.
- Water quality will be enhanced by the restored vegetated floodplain by providing sediment traps and nutrient uptake. Water supply needs will be reduced by the decreased need for irrigation. Thus, the CALFED non-ecosystem objectives of water quality improvement and water supply reliability are an additional benefit of this project.

Ecosystem stressors and potential restoration actions were identified and summarized in CALFED's "Summary of Technical Team Reports: Stressors and Example Restoration Actions", dated June 5, 1997. Table 1 below lists stressors which are targeted by the proposed project.

d. Background and Biological/Technical Justification

During January 1997, devastating floods swept through California's Central Valley, causing loss of life and an estimated $2 Billion in property damage. Stanislaus County was one of the most heavily impacted areas. The San Joaquin River escaped its banks, inundated urban areas, and caused intensive farmland damage.

Through Executive Order 11988, the Council for Environmental Quality and the Office of Management and Budget have directed the Army Corps of Engineers and other Federal agencies to explore cost-effective, non-structural flood protection projects. The proposed addition has grown into a multi-agency effort with the following partners: U.S. Fish and Wildlife Service, National Resource Conservation Service, Corps of Engineers, Bureau of Reclamation, and California Department of Water Resources.

Restoration of riparian and seasonal wetlands in the San Joaquin valley is considered to be a high priority by all State and Federal resource agencies. Wetland and riparian habitats have been reduced to less than five percent of historic levels. Consequently, fish and wildlife species which utilize these habitats have declined dramatically. The majority of the riparian habitat reduction is due to the reclamation of lands in the San Joaquin River floodplain. Lands within the project area currently support narrow riparian corridors, typically ranging from 10 to 50 yards wide.

The Service proposes to restore the natural floodplain and hydrologic processes to this reach of the San Joaquin River. This would be accomplished by breaching the existing flood control levee and restoring historic floodplain width. This will result in enhanced ecosystem functioning and allow for

Table 1. Summary of benefits accrued by the proposed project. This table lists the ecosystem stressors which would be targeted by the proposed project and describes how the stressors would be reduced.

Species, Habitat, Stressor, or other Benefit Type	Substressor Category	Description of Stressor	Restoration Actions in this proposal which address the stressor	Description of how this Proposal Targets the Specific Stressor
Floodplain and Marshplain Changes	Hydrologic isolation of floodplain or marshplain	Lack of flow over floodplains and marshplains, lack of return flow to main channel	Return flows to portions of floodplain which are isolated.	The proposed action would return lands to the floodplain which are currently isolated by levees, thus allowing a more natural hydrology in these areas.
	Physical isolation of the flood plain	Habitat fragmentation, loss of seasonal and tidal wetlands due to levee construction, or other land use changes.	Create seasonal and oxbow wetlands.	All proposed acquisitions will result in additional seasonal wetlands, through restoration or enhancement actions. Acquisition of Site A will also result in additional 3,112 acres of riparian forest.
			Breach levees at selected sites.	Lands within the levees will no longer be isolated from the river. Ecosystem and flood protection benefits will accrue.
			Expand refuges in the San Joaquin system, including the San Joaquin River National Wildlife Refuge.	Up to 6,169 acres of lands in fee title or easement would be acquired on or adjacent to the refuge lands.
			Encourage river corridor planning	This proposal would reduce development actions in the floodplain, and serve as a template for other nonstructural flood control and habitat restoration projects.
	Land use changes in the floodplain or marshplain	Urbanization, agriculture, grazing.	Fund incentives to increase area of natural lands enhanced to provide foraging and nesting habitat to migratory birds	This proposal includes an easement for a landowner (Task D) which would discourage development in the San Joaquin floodplain and maintain grazed pasture, corn, and winter wheat crops as critical winter forage habitat for Aleutian Canada geese.
Channel Form Changes	Prevention of channel meander	Channelization, loss of shallow water habitat, channel deepening, lack of floodplain, degradation of instream habitat conditions, loss of lotic conditions	Allow wider meander belt	Acquisition of lands for this proposal would allow channel meander to occur and eliminate need for levee maintenance and armoring, and river dredging, clearing and snagging.

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	Alteration of channel form	Loss of shallow water habitat, channel deepening, lack of floodplain	Restore adjacent wetland complexes	Acquisition of lands for Task A would allow Upper and Lower White Lakes and adjacent sloughs to be restored to natural contours.
	Isolation or elimination of side channels and tributaries	Loss of woody debris recruitment, loss of rearing and spawning habitat, loss of refuge habitat, decreased food production	Acquire/restore adjacent wetland complexes	Reconnection of White Lakes and adjacent watercourses to be restored to natural contours, thus allowing increased allochthonous input to the San Joaquin system
	Loss of existing riparian zone or lack of regeneration potential	Loss of food supply, loss of SRA habitat, loss of channel complexity	Manage post-flood land use for riparian growth	Floodprone lands would be acquired for riparian restoration along the San Joaquin River
			Riparian Restoration and revegetation projects	This is one of the primary purposes of the proposed acquisition
Land Use	Urbanization	Urbanization of the watershed that leads to loss of riparian habitat, habitat fragmentation, wetland drainage, and other impacts	Identify ways to preserve habitat values on land, but maintain private ownership	Easement acquisitions included in this proposal would allow for habitat values on private lands while providing foraging habitat for wintering Aleutian and cackling Canada geese.
			Acquisition of adjacent lands for buffer zones	Easements would buffer adjacent riparian zones, acquisition outside the refuge would buffer the refuge lands.
Non-Ecosystem Goal: Flood Damage Reduction			Through Executive Order 11988, the Council on Environmental Quality and OMB have directed federal agencies to explore cost-effective, nonstructural flood protection projects.	The proposed acquisition would help reduce flood peaks downstream on the San Joaquin River by allowing peak floodwater storage on the acquired lands.

natural regeneration of broad, contiguous stands of riparian and wetland habitats. As discussed in Section c, large acreages of restored habitats will enhance recovery of numerous special-status species that depend upon wetland and riparian habitats for survival. Benefits will also result for anadromous and warm-water fisheries, including enhanced streamside habitat and improved water quality.

These actions would allow flood waters to spread over the natural floodplain of the proposed addition, thus reducing downstream flood peaks, the flooding of private property, and damage to existing downstream levees.

After implementation, the proposed project will be self-sustaining in perpetuity. Lands acquired will be protected and managed under the auspices of the USFWS. Some routine maintenance will be required, primarily during the plant establishment period.

The proposed addition directly contributes to meeting the goals of multi-agency efforts, including the San Joaquin River Management Plan, California Riparian Habitat Joint Venture, Central Valley Habitat Joint Venture and the CALFED Bay-Delta Program. The proposed addition would provide compatible outdoor recreation opportunities for wildlife observation, environmental education, photography, and waterfowl hunting.

e. Proposed Scope of Work

As discussed in the project description above, completion of the project will be accomplished in three phases. Phase I, which includes acquisition and pre-restoration planning, is the subject of this proposal. Total cost for Phase I is $20,672,000, of which $10,672,000 is requested in this proposal. Funding for Phases II and III will likely be included in future RFPs. However, restoration of habitats will proceed regardless of whether CALFED subsequently funds Phases II and III of this project.

1. Land Acquisition process (Tasks A through D). For each of the parcels described, a specific process will be followed to acquire the lands, which includes:

Initial contact with willing seller (Permission to Appraise)	30 days
Preparation of Preliminary Project Proposal	Completed by USFWS
Appraisal to approved federal standards	90 days
Option for purchase agreement	10 days
Preparation of environmental documentation (when necessary)	120 days
Request for funds	60 days
Title search	30 days
Survey of property	30 days
Level I contaminant survey	10 days
Escrow and closing	30 days
Recording of deed and purchase of property	30 days

Many of the above actions will occur concurrently; therefore the actual time to complete acquisitions will be less than the total time listed above. Acquisitions will be phased, with Task A underway at this time. Task B will commence in FY98.

2. Site Cleanup (Task E). For the acquisition on the west side of the river (Task A), a significant effort will be needed to remove existing structures from the parcels. At least four abandoned houses, a dairy, several other buildings, corrals, and abandoned equipment and automobiles will require

removal before restoration can be initiated. The Service will hire a contractor to dismantle and remove all the structures on the properties.

3. Pre-restoration Planning (Task F). Maximization of restoration benefits will be accrued by levee breaching, tree and shrub planting, and recontouring portions of the parcels. Design specifications will be developed during Phase I of the project.

For planning levee breaches, several considerations will be made. Preferred sites for levee breaches will be those which have breeched in past floods, optimize circulation of water through the restoration area, and reduce entrapment of native fishes. This planning will be conducted by the USFWS in consultation with other agencies and local officials.

Recontouring of parcels to restore and enhance channels, depressions and ponded areas will be completed. USFWS staff will conduct a study of historical conditions on the sites. A plan will be developed to enhance the existing topography for wetland development. Cost estimates will be obtained for construction of this component.

Once the recontouring and levee breaching is completed, riparian and seasonal wetland species, primarily cottonwoods and willows, will naturally colonize the area. During the planning process, USFWS staff will estimate the magnitude and extent of riparian forest and seasonal wetlands which will develop once the recontouring and levee breaching is completed. To supplement the natural recolonization, an active replanting plan will be developed to more rapidly restore species which have poor dispersive properties or slow growth rates. Active replanting of these species will allow maximum habitat values to be obtained at the site much more quickly than relying solely on natural recolonization.

f. Monitoring and Data Evaluation

During Phase I, seasonal baseline bird surveys will be conducted in differing habitat types at the acquisition sites and adjacent riparian areas so that habitat development and bird use during restoration can be determined. Bird surveys will be conducted on adjacent mature valley oak and cottonwood-willow riparian forest communities, early successional riparian scrub habitats, and wetlands. Point count and mistnetting techniques will be used to establish species lists and relative abundance. The data will be used to evaluate the success of the restoration efforts and to determine avian diversity in various habitat types and successional stages on the refuge.

A detailed monitoring plan will be developed and initiated during Phase II. Evaluation as to how well project construction accomplishes design specifications; how well wetland and riparian habitats are establishing; subsequent habitat use by fish and wildlife; and long-term development of habitats will be determined through monitoring of the site and analysis of monitoring data. Monitoring will be conducted seasonally and more often if needed to address the effectiveness of the project. Fish and wildlife habitat use will be monitored seasonally. Aquatic, riparian and wetland habitats will be mapped initially and thereafter once per year, and measures of habitat changes documented. Information from each survey will be compiled, summarized, analyzed, and results presented in annual data reports. Results will be submitted to the CALFED technical review committee.

g. Implementability

CEQA and NEPA compliance for acquisition of lands within the San Joaquin NWR were completed in 1987. Compliance for land acquisition outside the approved boundary on the west side of the San

Joaquin River (Task A) is currently being completed. A public meeting for the acquisition was held on June 1, 1997. Consultation under Section 7 of the Endangered Species Act will be conducted with endangered species staff of the USFWS.

The Task A acquisition would be completed as a multiagency cooperative effort using funding from the USFWS, NRCS and the Corps of Engineers. NRCS is expected to contribute $5 million for floodplain easements through their emergency watershed protection program. Subsequently the USFWS would purchase the remaining interest in the lands in fee title. The Army Corps of Engineers and the Bureau of Reclamation have provided flood plain elevation determinations and mapping. The Corps of Engineers is also expected to purchase flood plain easements immediately adjacent (west) to the Task A acquisitions.

The USFWS-San Joaquin River NWR has received $5 million from Congress in the 1997 Emergency Flood Supplemental Appropriation for flood plain acquisition. If this proposal is not funded by CALFED the appropriation will be used to solely complete Task A and no other acquisitions will be completed until alternate funding is secured.

Local support for the project is high. Several public meetings concerning non-structural flood control, including these acquisitions, have been held to both inform and solicit input from the local farm and Modesto community. All landowners involved are willing sellers, or are willing to have easements purchased on their lands. All tasks listed in this project are components of the 1995 San Joaquin River Management Plan. The project has received written support of Congressman Gary Condit (D-Modesto), California State Resources Agency, Stanislaus Audubon Society, California Audubon Society, Sierra Club, Environmental Defense Fund, Riparian Habitat Joint Venture, faculty and students at Stanislaus State University and Modesto Junior College, and numerous local citizens. This proposed project was specifically recommended by the California State Governor's Flood Emergency Action Team in their report dated May 10, 1997.

IV. Costs and Schedule to Implement Proposed Project

a. Budget Costs

The table below summarizes the cost breakdown for each task. A description of each task is provided in the Proposed Scope of Work above.

Other funding sources and contingencies, and total CALFED funding request. As stated above, the project is expected to be partially funded by the Natural Resources Conservation Service's Emergency Watershed Protection Program. Funding from this program is expected to be about $5,000,000. At this time NRCS staff indicate that funding is likely to be approved. In addition, the San Joaquin River NWR may receive up to $5,000,000 for acquisitions within the floodplain under the Emergency Supplemental Appropriations. **Thus, our request to CALFED is for $10, 647,000.** However, in the event that either of these other funding sources are not provided, we would revise our request to include full funding of Task A.

Subcontracts for site clean-up and some of the bird survey work would be conducted using standard federal contracting procedures.

Project Task	Direct Salary and Benefit Costs	Service Contract	Acres	Fee Title/ Easement	Estimate Cost per Acre	Estimated Total acquisition cost	Total Cost
Task A. Acquire Hagemann-Vierra-Lara Properties	$40,000		3,112	fee title	$3,213	$10,000,000	$10,040,000
Task B. Acquire San Joaquin River Floodplain Corridor	$29,000		540	fee title	$5,000	$2,700,000	$2,729,000
Task C. Acquire Riley Slough Floodplain Corridor	$29,000		553	fee title	$5,000	$2,765,000	$2,794,000
Task D. Acquire Gallo Property (Faith Ranch)	$29,000		1,964	conservation easement	$2,500	$4,900,000	$4,929,000
Task E. Site Cleanup	$10,000	$25,000					$35,000
Task F. Floodplain Restoration Planning Studies, including biological monitoring	$100,000	$20,000					$120,000
TOTAL	$237,000	$45,000	6,169			$20,365,000	$20,647,000

b. Schedule Milestones

TASK	Site A	Sites B-D
Preparation of Preliminary Project Proposal	April 1997	December 1997
Permission to appraise	April 1997	December 1997
Completed appraisal to federal standards	July 1997	April 1998
Draft environmental documentation completed	September 1997	N/A
Environmental documentation completed	November 1997	N/A
Request funds	November 1997	June 1998
Title search/survey of property	November 1997	June 1998
Escrow and closing	December 1997	July 1998
Recording of deed and purchase of property	December 1997	July 1998
Site Clean-up	December 1998	N/A
Pre-restoration planning	December 1998	December 1998

Biological monitoring will be ongoing, commencing in the fall of 1997. Annual reports will be submitted in October of each year.

c. **Third Party Impacts**

Accommodation must be made for existing irrigation drainwater entering the San Joaquin River currently crossing Site A from the westside agricultural lands. Drainwater runoff will be accommodated in the restoration plan.

The Corps of Engineers is required provide the same level of flood protection to landowners outside the project area as was afforded before the floods of 1997. The Corps levee on this reach of the river was approximately 42' msl. Subsequent to the acquisition and prior to the levee breaching, the Corps will purchase flowage easements up to the 42' contour from willing sellers west of the Task A project area.

The Corps will build a protective ring levee around the West Stanislaus Irrigation District's pumping station on the edge of the floodplain on West Stanislaus Road.

The USFWS is will allow the West Stanislaus Irrigation District to clean out, as needed, their lift canal from the San Joaquin River to the pump station on West Stanislaus Road.

If the landowner at El Solyo Dairy property does not choose to sell his two residences as part and parcel of his property, then the Corps will build, as outlined in their June 28, 1997 Project Information Report, a protective ring levee on the riverside of his dwellings.

V. Applicant Qualifications

The Sacramento Realty Office of the U.S. Fish and Wildlife Service has acquired property for the 10 major National Wildlife Refuges in California. Since its establishment in 1992, the Office has acquired over 189,237 acres in fee or easement. The Office presently has a staff of six highly qualified specialists with a combined experience of over 100 years in the areas of reality, appraisal, and environmental protection. The office will coordinate and seek assistance from the Service's Regional Office in Portland, Oregon. Support staff from the Service's Sacramento Field Office of Ecological Services will lend support to this project. Certain portions of the work may be contracted, depending upon priorities and existing workloads of staff members.

The San Joaquin River National Wildlife Refuge was established in 1987 and currently manages 2,300 acres within the total 12,800-acre project boundary.

There are no known conflicts of interest with parties involved with this project.

VI. Compliance with Standard Terms and Conditions

The U.S. Fish and Wildlife Service, as federal agency acting as a representative of the public, agrees to adhere to all standard terms and conditions identified and applicable to the type of project (real estate transaction) being proposed. According to Table D, it is not necessary to submit Standard Contract Clauses with this proposal.

ATTACHMENT

Non-Structural Flood Protection Demonstration Project
San Joaquin River National Wildlife Refuge
Stanislaus County California
April, 1997

Historically, the San Joaquin River, following winter rains and Sierra snow melt, would regularly over-top its banks and inundate the natural floodplain. The system was dynamic: depositing rich alluvium; creating and cutting streambanks; creating riparian forests; changing the river's course and creating oxbow lakes and backwaters; clearing debris and streambeds; exposing and depositing gravel and sand; and creating salmonid spawning habitat.

Water storage/flood control dams were built on the San Joaquin River and its major tributaries, and water diversions were made for agricultural, industrial and metropolitan uses. Levees were constructed along the river's course to contain and greatly narrow the floodplain. The river was tamed, providing a false sense of safety and security. Homes, businesses, farm buildings and entire communities were unwisely built in the floodplain. But 100 year, 200 year, etc. flood events do and will occur. Inevitably dams are over-topped, levees break, and river waters seek their natural place, covering the floodplain.

The 1997 California floods killed 9 people, damaged or destroyed almost 20,000 homes and caused an estimated $2 billion in property damages. Given these ever-present dangers and costs to life and property and the associated flood protection costs (dam and levee construction, long-term maintenance and repairs) the federal government is seeking more cost-effective ways in dealing with potential flooding along the nation's dynamic river systems. The Council for Environmental Quality and the Office of Management and Budget have directed (via Executive Order 11988) the Army Corps of Engineers and other federal agencies to explore cost-effective, non-structural flood protection projects.

In support of this mandate, tile U.S. Fish & Wildlife Service has proposed a non-structural flood protection demonstration project through fee title acquisition of 3,112 acres of flood-prone properties. This has grown into a multi-agency effort whose partners include the National Resource Conservation Service, Corps of Engineers, Bureau of Reclamation and California Department of Water Resources. The lands to be acquired are adjacent to the San Joaquin River National Wildlife Refuge in Stanislaus County and will be incorporated into the refuge following acquisition. (See enclosed project proposal map.) Additionally, other properties (immediately west of the proposed fee acquisition) need protection from potential flood waters via flowage easements, setback levees, or acquisition.

Subsequent to fee title acquisition, the 3,112 acres will be restored to their historic floodplain function by removing or modifying existing flood control levees, restoring historic floodplain width, and restoring wetlands and riparian forests. These actions will allow flood waters to spread over the natural floodplain, thus reducing downstream flood peaks, flooding of private property, and damage to existing downstream levees. In addition fish and wildlife habitat will be improved, biodiversity increased, and water quality improved. These resource benefits directly

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contribute to meeting the goals of multi-agency efforts such as tile San Joaquin River Management Plan, California Riparian Habitat Joint Venture, Central Valley Habitat Joint Venture and the California/Federal -Bay/Delta Program. Additionally, newly purchased lands will provide compatible outdoor recreational opportunities (wildlife observation, environmental education, waterfowl hunting, etc.).

Because of the magnitude of the San Joaquin River flooding problems, this demonstration project will be only part of a larger watershed/riverine floodplain program to manage floodplains in a more long-term, cost-effective, and environmentally sensitive manner.